

CHAPTER 1

The Definition of Health



Health Tips

The Two-Minute Stress Reducer



Dollars & Health Sense

Profiting from Making People Sick
How Much Money Is a Life Worth?



Global Wellness

Social Factors and Health: The COVID-19 Pandemic
Type 2 Diabetes as a Lifestyle Disease



Managing Stress

Mind–Body Harmony



Wellness Guide

Spirituality and Health

LEARNING OBJECTIVES

1. Describe the medical and wellness models of health.
2. List the key points of the World Health Organization's definition of health.
3. List and describe the six dimensions of wellness.
4. List the three health behaviors responsible for most of the actual causes of death.
5. Define *lifestyle disease*.
6. Identify the goals of *Healthy People 2030*.
7. List and describe the major health issues of college students.
8. Describe the Health Belief Model, Transtheoretical Model, and Theory of Reasoned Action.

Most people think that health is what you have when you are not sick or dying. It's true that not feeling sick is an important aspect of health. Just as important, however, is having a sense of optimal **well-being**—a state of physical, mental, emotional, social, and spiritual wellness. In this view, health is not only being free of disease and disability but also living in harmony with yourself and with your social and physical environments (Sartorius, 2006). You foster your own health and well-being when you:

1. undertake healthy behaviors and practices such as consuming nutritious foods, engaging in daily body movement, attending to your mental and social well-being, and supporting actions that contribute to the health and well-being of your community, and the planet; and
2. refrain from health-harming behaviors (e.g., consuming unhealthy foods, smoking cigarettes, abusing drugs, or becoming overweight) and limit your exposure to health risks (e.g., driving after drinking).

The World Health Organization (WHO) defines health as “a state of complete physical, mental, and social well-being and not merely the absence of disease and infirmity.” This definition reflects the old English root of our word health, which is *hal*, meaning well or whole. The WHO definition recognizes that health is affected by the interrelatedness of the physical, psychological, emotional, spiritual, and environmental influences in people’s lives. There is more to health than freedom from sickness. Being healthy also means being able to do what you want to, what you must do at the appropriate time, and being in good spirits and feeling emotionally healthy most of the time.

Jesse Williams (1939), one of the founders of modern health education, echoes the WHO definition by describing health as “that condition of the individual that makes possible the highest enjoyment of life, the greatest constructive work, and that shows itself in the best service to the world. . . . Health as freedom from disease is a standard of mediocrity; health as a quality of life is a standard of inspiration and increasing achievement.”

In this chapter, we discuss the definition of health, how modern lifestyles contribute to an enormous degree of chronic illness throughout the world, and how adopting healthy living habits can help people maintain wellness. Throughout this text, we show you ways to maximize your health by understanding how your mind and body function, how to limit exposure to pollution and toxic substances, how to make informed decisions about health and health care, how to be responsible for your actions and behaviors, and how social, economic, and political forces affect your ability to lead a healthy life. Learning to be responsible for the degree of health and vitality you want while you are young will help ensure lifelong wellness and the capacity to cope with sickness when it does occur.

Models of Health

Scientists and health educators have developed two main ways to define health: the medical model and the wellness model.

The Medical Model of Health

The **medical model** of health’s main tenet is that health is the absence of one or more of the “five D’s”—death, disease, discomfort, disability, and



Mind–Body Harmony

When you are well and healthy, your body systems function harmoniously. If one of your organs is not functioning properly, however, the other organs may not be able to function correctly either, and you may become ill. Thus, disease may be regarded as the disruption of a whole person’s physical and mental harmony.

In traditional Western science and medicine, mind–body harmony is considered in terms of *homeostasis*, the tendency for coordinated self-regulation among bodily processes that leads to optimal functioning and survival. Many Asian philosophies embody an idea of mind–body harmony. This idea is based on a universal energy called **chi** (or *qi*), which must be distributed harmoniously throughout the mind–body to attain and maintain health. Harmony is expressed as a balance of forces called *yin* and *yang*. Yin and yang represent the opposing and complementary aspects of the universal chi that is present in everything, including our bodies. Yang forces are characterized as light, positive, creative, full of movement, and having the nature of heaven. Yin forces are characterized as dark, negative, quiet, receptive, and having the nature of Earth.

The Yin–Yang Symbol

This symbol represents the harmonious balance of forces in Nature and in people. The white and dark dots show that there is always some yin in a person’s yang component and

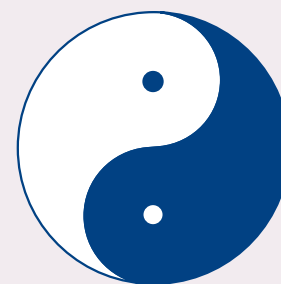
vice versa. The goal in life and Nature, according to the traditional Asian view, is to maintain a harmonious balance between yin and yang forces.

In Asian philosophies and medicine, body and mind are regarded as inseparable. Yin and yang apply to both mental and physical processes.

When yin and yang forces are in balance in an individual, a state of harmony exists and the person experiences health and wellness. However, if either yin or yang forces come to predominate in a person, a state of disharmony is produced and disease may result.

Treatment of disease is designed to reestablish harmony of the mind and body. The balance of yin and yang forces must be restored so that health returns.

Tai chi ch’uan and *qigong* (pronounced jê-kung) are Chinese mind–body methods that are practiced by many North Americans to help maintain health and harmony. These exercises are especially useful for older persons whose bodies can no longer manage vigorous exercise. People who practice *qigong* experience lower blood pressure, improved circulation, and enhanced immune system functions.



dissatisfaction. In other words, if you are not sick, disabled, or mentally unstable or otherwise miserable, you are defined as healthy. The medical model relies almost exclusively on biological explanations of disease and illness and is interpreted in terms of malfunctioning organs, cells, and other biological systems (e.g., liver disease, heart disease, or osteoporosis). In the medical model, the absence of health is determined by the presence of observable or measurable symptoms. In times of sickness, the restoration of health is determined by the successful alleviation of symptoms and hopefully ridding the body of the underlying cause of the disease.

The Wellness Model of Health

The **wellness model** emphasizes self-healing, the promotion of health, and the prevention of illness rather than solely treating symptoms of disease. Besides the absence of disease, the wellness model of health encompasses the following dimensions:

Physical wellness: maintaining a healthy body and mind (brain) by consuming nutritious food, attaining near daily manageable amounts of bodily movement, undertaking informed and responsible health practices both to enhance well-being and prevent illness, and seeking competent medical care when ill.

Emotional wellness: understanding, managing, and mindfully expressing your emotions and coping healthfully with life's problems and stresses. Emotional wellness involves taking responsibility for your behavior, cultivating wisdom, and maintaining a sense of humor.

Intellectual wellness: having a mind open to new ideas and concepts and to access and critically evaluate the veracity of health information. Much of the content of mass media—social media, the Internet, television, and print outlets—refers to health issues. Health practitioners and researchers are trained to assess critically the findings, interpretations, and conclusions drawn from health research, and in the best cases non-professionals can receive unbiased explanations of research from professionals they trust and whose goals are to enhance others' health and well-being. However, because its primary goal is profit and not necessarily accurate and unbiased reporting, mass

Assessing Health and Medical Information

Things to keep in mind when getting information derived from health and medical research:

- What organization or individual is providing the information? What is the provider's stated or implied intention? Assessing the motives of information provided on the internet is especially important because a web site can be made to appear educational when, in fact, its goal is to influence attitudes and behaviors, including purchases.
- What is the information provider's training and expertise? Popular magazine articles often quote scientists and doctors to support the article's thesis. Can you really be sure that the person being quoted is a reliable authority? What is the source of the data in the research? Is the information based on an observer's experience, a survey, or a study comparing a "treatment" group with a group of "matched controls."
- Who Benefits? What benefits is the source of the information receiving for communicating it. You want to avoid being manipulated by bias presented in the guise of scientific truth.

Occasionally, a study's results are described as *statistically significant*, which means that an observation, or a comparison of observations, is highly likely not to be the result of mistakes made by researchers or to have occurred by chance. Findings are statistically significant if a mathematical analysis of the data show a very small — or *insignificant* — chance that the findings from this analysis are wrong. Scientists generally are willing to accept a finding as true if the chance it is wrong is less than 1 in 20 (reported as $p = 0.05$).

Figure 1.1 Certain Things Should be Kept in Mind When Getting Information Derived from Health and Medical Research.

media may skew presentations about health research to capture interest (and to sell products and services) rather than to enlighten and educate (**Figure 1.1**).

Social wellness: striving for healthy and harmonious interactions with others including family, friends, intimate-partners, classmates, neighbors, and the larger local and world communities. Social wellness involves effectively communicating thoughts and ideas to others and receiving with acceptance and tolerance the thoughts, ideas, and emotional expressions of others, including those who are different from yourself. Social



Spirituality and Health

Many people find that spirituality—experiencing hope, comfort, and inner peace through religion, a connection with Nature, or a force larger than oneself—plays a role in health and illness. Spiritual experiences tend to engender feelings of compassion and empathy; peace of mind; relatedness and communion; and harmony with the environment. Spirituality can be a cornerstone of health because it represents a balance between the inner and outer aspects of human experience. For some, the spiritual dimension of life is embodied in the practice of a specific religion. For others, the spiritual dimension is nonreligious yet part of a personal philosophy. Many practices can help

people experience the spiritual realms of existence, including prayer, meditation, yoga, musical and artistic endeavors, and helping others.

Becoming more spiritually aware, regardless of the chosen path, can lead to a healthier life. Being in touch with your spiritual feelings helps you handle life's ups and downs with understanding and compassion for yourself and others. You become open to love in the highest sense of its meaning, which is acceptance and tolerance. You begin to love yourself despite your problems and hang-ups. You love your family and friends when relations are strained. You see beauty and harmony in more and more aspects of living. And occasionally—however fleetingly—you may experience the truly wondrous feeling of being completely and joyfully alive.

wellness also includes managing your time and activities effectively.

Spiritual wellness: a state of harmony within yourself, with other people, and with a deity or Nature. Most often spiritual wellness involves a sense of identifying with a beneficent group, philosophy, or a religious practice that is larger than yourself. Spiritual wellness also includes positive and helpful personal values and beliefs, seeking meaning and purpose in life, practicing compassion, and appreciating natural forces in the universe.

"The health of a people is really the foundation upon which all their happiness and all their powers as a state depend."

—**Benjamin Disraeli**, former Prime Minister of England

Occupational wellness: finding satisfaction, creativity, and a sense of accomplishment in what you do to earn a living, to contribute through your work to making a healthy society and world and creating a balance among work activities and other aspects of life.

Environmental wellness: living in an environment characterized by clean air, water, and land that also supports basic human needs and is free of interpersonal violence and the threat of climate change.

Financial wellness: attaining and maintaining resources to meet physical, psychological, and social needs, including planning for the future and preparing for unforeseen financial difficulties ("Hope for the best, plan for the worst."), and being aware of others' financial values, needs and circumstances.



The Two-Minute Stress Reducer

Stressed out?

Be still.

And take a

D

E

E

P

Breath.

Center Yourself

Focus your attention inward. Allow thoughts, ideas, and sensations to pass through your mind without reacting to any of them. You will notice them pass out of your mind, only to be replaced by new thoughts and sensations. Continue to breathe deeply and slowly and watch the passing of the thoughts that stress you.

Empty Your Mind

Acknowledge that you have preconceived ideas and ingrained habits of perceiving. Know that you can empty your mind of distressing thoughts and replace them with ones that create inner harmony.

Ground Yourself

Feel the sensation of your body touching the Earth. Place your feet (or your bottom if you are sitting, or your entire body if you are lying down) firmly on the Earth. Let your awareness come to your point of contact with the Earth, and feel gravity connecting you to Mother Earth and stabilizing you.

Connect

Allow yourself to feel your physical and spiritual connection with all living things. Remind yourself that with every breath you are reestablishing your connection with all of nature.

Health is not something suddenly achieved at a specific time like graduating from college. Rather, health is a lifelong process through which you develop and encourage every aspect of your body, mind, and spirit to interrelate harmoniously as much as possible. Almost every choice we make in life can potentially affect our health and well-being. Sometimes the social and physical environments present obstacles to making healthful choices. For example, a person may know not to eat fatty fast food every day, but this kind of food may be easier to obtain than healthier alternatives. Wellness includes recognizing that some social influences are not healthy and finding healthier alternatives. It also includes taking actions to make the social and physical environments healthier for all.

Determinants of Health and Wellness

Determinants of health and wellness consist of personal, social, economic, and environmental factors that affect individual, community, and world health. The main determinants of health include the following: personal biology, economic and social status, environmental attainment, environmental quality, and individual behaviors.

Personal Biology

Personal biology is a manifestation of one's genetic endowment and life experiences that affect the body throughout the life course. The genetic endowment consists of the many thousands of genes inherited from parents that determine the body's structure and function (see Chapter 12). Malfunctioning genes can cause serious, life-altering inherited diseases such as sickle cell disease, cystic fibrosis, or breast cancer (Genetics, 2020). Long-lasting or permanent change to one's personal biology can result from infections, accidents, or acts of violence that result in impaired mobility, mental processes, hearing, and vision and that significantly alter one's life in other ways (U.S. Centers for Disease Control and Prevention, 2019).

Some 12% of Americans have had *adverse childhood experiences* or ACEs (divorce, abandonment, rejection, parental substance abuse, sexual abuse, and neglect) (**Table 1.1**). Four or more ACEs are associated with a proportional increased risk for mental and physical ill health throughout life and early death (U.S. Centers for Disease Control

and Prevention, 2021). Attempting to cope with the mental health consequences of ACEs, such as anxiety and depression, can lead to unhealthy lifestyle behaviors such as overeating or consuming unhealthy foods, substance abuse, poor sleep, and lack of physical activity (Felitti, 2009). Recovery from the traumas of ACEs is possible with a personal intention to heal, therapist-guided mental and physical exercises, and the support of caring others.

Economic and Social Status

Economic determinants of health include resources to meet life's needs, such as healthy food, an adequate education, a good-paying job, living in clean and safe surroundings, and access to quality medical care. Social determinants also include social support and community cohesion. Social and economic determinants of health are greatly affected by discrimination by race, sex, gender, and social status (see the Global Wellness box "Social Factors and Health: The COVID-19 Pandemic").

Environmental Attainment

Educational attainment has a major effect health and wellness (Zajacova & Lawrence, 2018). For example, educational attainment is highly related to income and employment, which facilitate access to the basics of health and wellness: nutritious food, living in a healthy and safe environment, and having access to competent medical care when needed. Furthermore, education can facilitate accessing and utilizing health and medical information to promote living healthfully.

Environmental Quality

Environmental determinants of health are both natural and human-made (called the *built environment*). Natural environmental determinants of health include the quality of air, water, land, and the risks of harsh weather and climate change. The built environment includes buildings, homes, neighborhoods, transportation options, recreational settings, and exposure to toxic substances and other physical hazards. For example, millions of people in cities around the world are exposed to unhealthy levels of ozone and other air pollutants from automobile and power-plant emissions, thus increasing their risk of asthma and other respiratory conditions.

Table 1.1 Adverse Childhood Experiences (ACEs) Questionnaire

Four or more experiences carry a proportional risk for ill health as an adult. Numbers in parentheses indicate percentage affected in the original ACE study population.

Category	Examples
Abuse	<p>Emotional abuse: A parent, stepparent, or adult living in your home swore at you, insulted you, put you down, or acted in a way that made you afraid that you might be physically hurt. (10.6%)</p> <p>Physical abuse: A parent, stepparent, or adult living in your home pushed, grabbed, slapped, threw something at you, or hit you so hard that you had marks or were injured. (28.3%)</p> <p>Sexual abuse: An adult, relative, family friend, or stranger who was at least 5 years older than you ever touched or fondled your body in a sexual way, made you touch his or her body in a sexual way, or attempted to have any type of sexual intercourse with you. (20.7%)</p>
Household Challenges	<p>Mother treated violently: Your mother or stepmother was pushed, grabbed, slapped, had something thrown at her, was kicked, bitten, hit with a fist, hit with something hard, repeatedly hit for more than a few minutes, or ever threatened or hurt by a knife or gun by your father (or stepfather) or your mother's boyfriend. (12.7%)</p> <p>Substance abuse in the household: A household member was a problem drinker or alcoholic or a household member used street drugs. (26.9%)</p> <p>Mental illness in the household: A household member was depressed or mentally ill or a household member attempted suicide. (19.4%)</p> <p>Parental separation or divorce: Your parents were separated or divorced. (23.3%)</p> <p>Incarcerated household member: A household member went to prison. (4.7%)</p> <p>Emotional neglect: No one in your family helped you feel important or special, you did not feel loved, people in your family did not look out for each other nor felt close to each other, and your family was not a source of strength and support. (14.8%)</p> <p>Physical neglect: There was no one to take care of you, protect you, and take you to the doctor if you needed it, you did not have enough to eat, your parents were too drunk or too high to take care of you, and you had to wear dirty clothes. (9.9%)</p>

U.S. Centers for Disease Control and Prevention, Kaiser Permanente. The ACE Study Survey Data [Unpublished Data]. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2016. <https://www.cdc.gov/violenceprevention/childabuseandneglect/acestudy/about.html>



Social Factors and Health: The COVID-19 Pandemic

The COVID-19 pandemic provided a horrific example of social factors affecting health. Among the sickest and those who died, social factors such as race, income, education, and access to health care explained the stark differences found in trauma related to COVID-19. Long-standing social inequities influenced a wide range of health and quality-of-life risks and outcomes (listed below) that, along with racism and its associated chronic stress, contributed disproportionately to being affected by COVID-19.

- **Social Determinant 1, Neighborhood and Physical Environment:** Where and how people live are major risk factors for COVID-19 infection and its catastrophic consequences. For example, low income can force people to reside in crowded living spaces or crowded neighborhoods that can inadvertently expose them to others who are infected.

Low-income neighborhoods may lack reliable transportation to employment, health, and medical services. Stores offering healthy foods may be rare. Living near freeways and industrial plants expose residents to environmental pollution.

- **Social Determinant 2, Health and Medical Care:** Low income, joblessness, and racial segregation can contribute to lack of access to quality health care, health insurance, or linguistically and culturally responsive health care. Inequities in treatment may result in distrust of government and healthcare systems. Such barriers increase risks for poor health and health outcomes by limiting health promotion, disease and injury prevention, and condition-management practices.
- **Social Determinant 3, Occupation and Job Conditions:** Essential workers—those employed in healthcare facilities, farms, factories, food production and processing, grocery stores, and public

transportation—have increased risk of exposure to COVID-19. Their jobs generally require frequent or close contact with the public or other workers, involve activities that cannot be done from home and worksites that are not equipped with protective equipment and are not willing or able to make adjustments in working conditions to limit exposure to COVID-19. Also, they may have jobs that do not offer paid sick days, so they feel compelled to work in order to maintain an income even if infected.

- **Social Determinant 4, Income and Wealth:** Low income often means having significant debt and difficulty managing expenses, paying bills (including medical bills), and accessing affordable quality housing, nutritious food, and reliable child care.

- **Social Determinant 5, Education:** Low proficiency in speaking and reading English make it more difficult to obtain and understand health formation and to follow written materials intended to help lessen COVID-19 risk. Lower levels of educational attainment create barriers to quality job training and college entrance.

Disproportionate exposure and subsequent devastating health consequences from COVID-19 infection magnified the harm engendered by the unequal availability of social resources needed to ensure the health and well-being of all individuals.

Data from U.S. Centers for Disease Control and Prevention (2020). COVID-19 Racial and ethnic health disparities. (<https://www.cdc.gov/coronavirus/2019-ncov/community/health-equity/racial-ethnic-disparities/index.html>).

Individual Behaviors

In regions of the world without vaccination, modern sanitation, and effective forms of infection and infestation control, people are at risk for a variety of diseases caused by viruses, bacteria, parasites of various kinds, and worms. COVID-19, tuberculosis, malaria, and Ebola are examples. These diseases account for 50% of annual deaths worldwide, principally in economically challenged regions.

Because of high-quality sanitation and medical care, with the exception of COVID-19 and other unexpected pandemics (see Chapter 9), residents of high- and moderate-income countries are at minimal risk for many kinds of fatal infections and infestations. Instead, these individuals are at risk for **lifestyle diseases** resulting from personal behaviors such as cigarette smoking; consuming too little fruits, vegetables, and whole grains and high levels of processed meats and industrial food products laden with added sugar and salt; and a sedentary lifestyle. Heart disease, for example, results primarily from poor diet consisting of highly processed manufactured foods, cigarette smoking, lack of exercise, high levels of stress, and high blood pressure (Mozaffarian & Glickman, 2019). Cancer is associated with poor nutrition, tobacco smoking, and exposure to hazardous substances in the environment. Other lifestyle diseases include lung disease from tobacco smoking, type 2 diabetes, and kidney disease from being overweight (see the Global Health box “Type 2 Diabetes as a Lifestyle Disease”), and suicide, homicide, and fatal accidents from stress and alcohol and substance abuse. Eight of the top 10 causes of death in the United States and Canada are from lifestyle diseases (**Table 1.2**).

Many lifestyle diseases are **chronic diseases**, meaning that they often persist for life, with ever-increasing dependence on the medical system and gradual lessening of the quality of life. Worldwide, between 50% and 60% of health expenditures are for treatment of chronic diseases that are largely preventable by changes in unhealthy living habits. Whereas at some level each individual is responsible for her or his lifestyle decisions, scientists and health professionals know that community, state, national, and international efforts are needed to

Table 1.2 Top 10 Causes of Death in the U.S and Canada, 2019

Disease	Rank	
	U.S.	Canada
Heart disease*	1	2
Cancer*	1	2
Accidents (unintentional injuries)*	3	3
Chronic lower respiratory diseases	4	5
Stroke (cerebrovascular diseases)*	5	4
Alzheimer's disease	6	8
Diabetes*	7	6
Nephritis, other kidney disease	8	7
Influenza and pneumonia	9	10
Intentional self-harm (suicide)*	10	9

*Indicates lifestyle disease

Data from U.S.: National Center for Health Statistics <https://www.cdc.gov/nchs/fastats/leading-causes-of-death.htm>. Canada: Statistics Canada <https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1310039401>



Type 2 Diabetes as a Lifestyle Disease

Diabetes is a disease in which the amount of sugar in the blood increases to unhealthy levels as a result of malfunctions in the body's sugar-regulating system. There are two forms of diabetes:

1. **type 1 (insulin-dependent)** in which the pancreas (a digestive organ) is diseased and unable to manufacture the hormone insulin, which regulates the level of sugar in the blood; and
2. **type 2 (non-insulin-dependent)**, which is caused by too much fat in the blood (generally from being overweight) and results in the body becoming resistant to the actions of insulin (*insulin resistance*).

In 2021, approximately 8.5 % of the world's population—463 million individuals—were affected by type 2 diabetes. Type 2 diabetes is a major cause of blindness, kidney failure, heart attacks, stroke, and lower limb amputation. About 10% of North American population has type 2 diabetes. Worldwide, type 2 diabetes is responsible for approximately 4 million deaths each year, making it the seventh leading cause of death in the world. The disease affects people of all ages and males and females equally. The global prevalence of type 2 diabetes is projected to increase to 700 million individuals by 2045.

The global epidemic of type 2 diabetes is considered to be the result of rapid worldwide economic development and urbanization in the last part of the 20th century. When people moved to cities for work, their living habits changed from consuming traditional diets that were somewhat balanced and moderate amounts of body movement to the consumption of unhealthy, processed, manufactured, and fast foods and a sedentary lifestyle. This is the reason type 2 diabetes is strongly associated with being overweight (Khan, Hashim, King, & Kahn, 2019). For every 20% increase in overweight, the chance of developing type 2 diabetes doubles. Type 2 diabetes is costly and often medically challenging to treat. Rather than drugs to control the medical consequences of type 2 diabetes, it is better for patients to eat healthfully and to engage in regular body movement (Nutrition Source, 2020). As shown in China, Finland, India, Japan, and the United States, community-based health programs are an effective way to help individuals prevent the onset of type 2 diabetes (Shirinzadeh, Afshin-Pour, Angeles, Gaber, & Agarwal, 2019). These programs offer individual and group-based educational sessions to help persons attain a healthy diet and incorporate movement and stress reduction activities into their lives.

World Diabetes Day is November 14 (<https://worlddiabetesday.org/>).



Profiting from Making People Sick

Heart disease, stroke, lung cancer, colon cancer, type 2 diabetes, and chronic obstructive pulmonary disease account for nearly half of all deaths in the United States. These diseases are caused in large part by unhealthy lifestyle choices: eating poorly, smoking cigarettes, being overweight, and not exercising. Unfortunately, many businesses profit from individuals' unhealthy lifestyles—indeed, some encourage unhealthy behavior as the basis of their business (Allen, 2019).

The tobacco industry is the prime example of profiting financially from harming others. No other industry makes a product that, when used as directed, causes disease and death. Knowing that long-term smokers (i.e., their best customers) tend to begin smoking as teens, the tobacco industry uses sophisticated marketing methods to lure young people to smoke and to get them hooked. The tobacco industry is a friend to no one.

Whereas it is not as obvious as with tobacco, some food companies also profit from harming their customers. A typical serving of fast food (e.g., burger, fries, and a soft drink or shake) contains around 1,000 calories, about half or more of most individuals' energy requirement for one day. This is why a steady diet of fast food can lead to weight problems and associated illnesses like type 2 diabetes.

Some of America's largest corporations are in the business of supplying consumers with less-than-healthy amounts of sugar (Figure 1.1A). The sugar is contained in packaged foods (from ketchup to breakfast cereals),

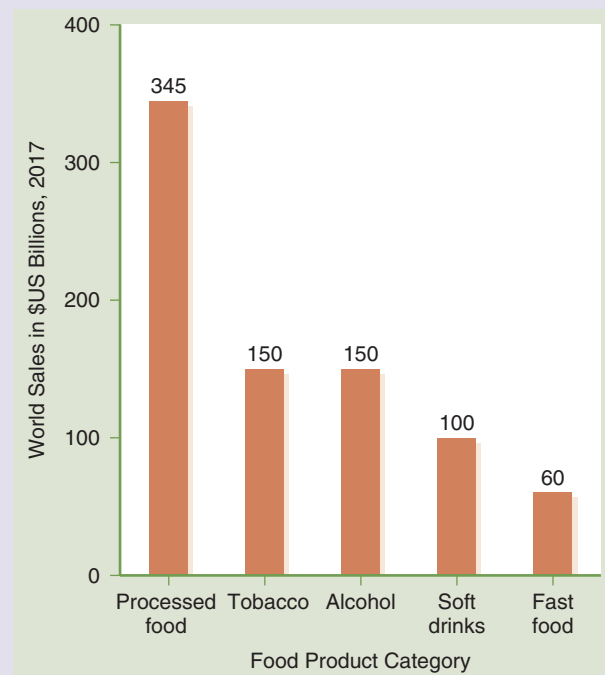


Figure 1.1A Sales Figures for 33 Leading Transnational Corporations in 2017 by Sector.

snack foods, fast foods, and sugar-sweetened beverages such as sodas, energy drinks, and sports drinks. Sugar-sweetened beverages alone deliver 36% of the added sugar that Americans consume, contributing to the risk of heart

disease and type 2 diabetes. And, unlike other products to which sugar is added, sugar-sweetened beverages have no nutritional value; they can readily be replaced by healthy beverages such as water and low-fat milk. Efforts to limit the damage to health from added sugar in food include taxing sugar-sweetened beverages to lessen consumption, particularly among youth, and encouraging

food companies to voluntarily reduce the amount of sugar added to their products.

You need not wait for the actions of government and industry to better your health. You can start today by adopting healthy living habits, being mindful of others attempts to profit from distributing ill health, and being especially wary of health, medical, and pharmaceutical drug advertising.

help individuals make healthy lifestyle choices (see the previous Global Wellness box on COVID-19). For example, schools and businesses can encourage food services to provide healthy items. The stairwells of office buildings can be made visually attractive to encourage walking stairs instead of riding elevators. Businesses can organize group walks for employees during breaks; they can also offer financial incentives for adopting healthy living habits. Municipalities can ensure that new subdivisions have sidewalks, bike lanes, and parks. Governments can impose taxes on health-harming products (e.g., sugar-sweetened drinks and tobacco products) to reduce consumption, insist that consumers be made aware of the content and risks of manufactured foods, and be ever watchful that manufacturers ensure food and product safety. Governing bodies can create laws that enhance individual and public safety—for example, cleanliness in food manufacturing, ordinances prohibiting smoking in public spaces, and fuel efficiency standards for fossil fuel powered vehicles.

Health Status

Health status is an individual's state of health and wellness, taking into account the presence of disease, disability, and the individual's self-rated assessments of her or his overall physical, mental, and social health and the degree of meaning and purpose in his or her life (VanderWeele, 2019) (**Figure 1.2**). Note that some people perceive themselves as healthy despite having one or more chronic diseases, and others perceive themselves as ill when no biological evidence of disease can be found.

Optimal health and well-being include mental and physical health, happiness and life satisfaction, meaning and purpose, character and virtue, and close social relationships.

Health status can be scientifically measured (**Figure 1.3**). Some methods assess the status of a group, such as people living in a particular region, people of a certain age, or people with a certain

Category	Description
Mental & Physical Health	Self-rated degree of physical and mental health
Financial Status	Self-rated concern about being able to meet normal living expenses
Happiness	Self-rated degree of current satisfaction with life Self-rated usual sense of happiness/unhappiness
Meaning & purpose in life	Self-rated extent that life activities are worthwhile "I know my purpose in life."
Close personal relationships	Contentment and satisfaction with current relationships and friendships
Character	Strive to promote good in all (even challenging) situations Willingness to forego some happiness in the present for greater happiness in the future

Figure 1.2 Components of Health and Well Being.

Data from VanderWeele, T.J. (2019). Reimagining Health "Flourishing." *Journal of the American Medical Association*, 321, 1667–1668.

disease or disability. The **incidence** of a given health condition refers to the number of people in a group who experience that condition in a given period of time, usually a year (e.g., "The incidence of breast cancer in the United States is 200,000 cases per year"). The **prevalence** of a given health condition is the total number of people in a group affected by that condition at the time of measurement (e.g., "In 2019, the prevalence of breast cancer among American women is 128 per 100,000 women").

You can observe a lot just by watching.

Yogi Berra

Measuring Method	What is Measured
Years of Potential Life Lost (YLL)	Total number of years not lived by people who die for whatever reason before reaching a given age.
Disability Adjusted Life Years (DALYs)	Total number of years lived with illness or disease limits life in some way.
Physically and Mentally Unhealthy Days	Reported for the prior 60 days.
Chronic Disease Prevalence	Reported for either cardiovascular disease, arthritis, diabetes, asthma, cancer, and chronic obstructive pulmonary disease (COPD).
Limitation of Activity	Due to physical, mental, or emotional problems
Self-assessed Health Status	Individual perception of his or her health rated as excellent, very good, good, fair, or poor.
Health Related Quality of Life	An individual's or a group's perceived physical and mental health over time and the impact of preventable diseases, injuries, and disabilities on the quality of life.

Figure 1.3 Scientific Measures of Health Status.

Health: United States

For decades the United States has been the wealthiest nation in the world. Given this wealth and the fact that in the last 100 years, more U.S. scientists have been awarded the Nobel Prize in physiology and medicine than any other country, the health status of the American population is far lower than nearly all countries of equivalent income (e.g., Australia, Canada, France, Germany, Italy, Japan, Netherlands, Norway, Spain, Switzerland, and the United Kingdom) (**Figure 1.4**).

Compared to individuals in peer countries, Americans have shorter life expectancy, more mothers dying when giving birth, and more people with chronic diseases such as high blood pressure, cancer, and diabetes. This incongruous situation is so even though annual per-person

Health Measure	U.S. Rank
Life expectancy from birth in years	12th
Maternal mortality (%/100,000)	12th
Infant mortality (%/1000 live births)	12th
Mortality rate (deaths/yr/100,000 population)	12th
Premature deaths (YLL)***	12th
Years living with disease (DALYs)****	12th
Doctors/1000 population	11th
Spending on pharmaceuticals & medical devices	1st
Percent with some health insurance	12th
Daily smokers	12th
Death rate for poor mental health and substance abuse	1st
Alcohol consumption (liters/person/yr)	5th
Percent with Alcohol Abuse Disorder	2nd
Opioid deaths/1 million inhabitants (2018)	1st
Percent overweight/obese	1st
Percent overweight children	1st
Air pollution deaths/yr	3rd
Heart Disease mortality/100,000 persons	1st
Stroke mortality/100,000 persons	7th
Cancer incidence/100,000 persons	2nd
Cancer mortality/100,000 cases	5th
Diabetes prevalence/100,000 persons	1st
Suicide/100,000 persons	2nd
Self-rated health	
% bad or very bad	12th
% good or very good	2nd

Source: Organization for Economic Development and Cooperation (2019) *Health at a Glance*. 2019: OECD Indicators. Paris: OECD Publishing, Paris, <https://doi.org/10.1787/4dd50c09-en>.

Figure 1.4 Health Care Quality Comparisons Among High Income Countries. With regard to a variety of measures of health, the United States consistently ranks well below these high-income countries: Australia, Canada, France, Germany, Italy, Japan, Netherlands, Norway, Spain, Switzerland, and the United Kingdom.

Data from "Health at a Glance, 2019." OECD Indicators. Paris: OECD Publishing. <https://doi.org/10.1787/4dd50c09-en>

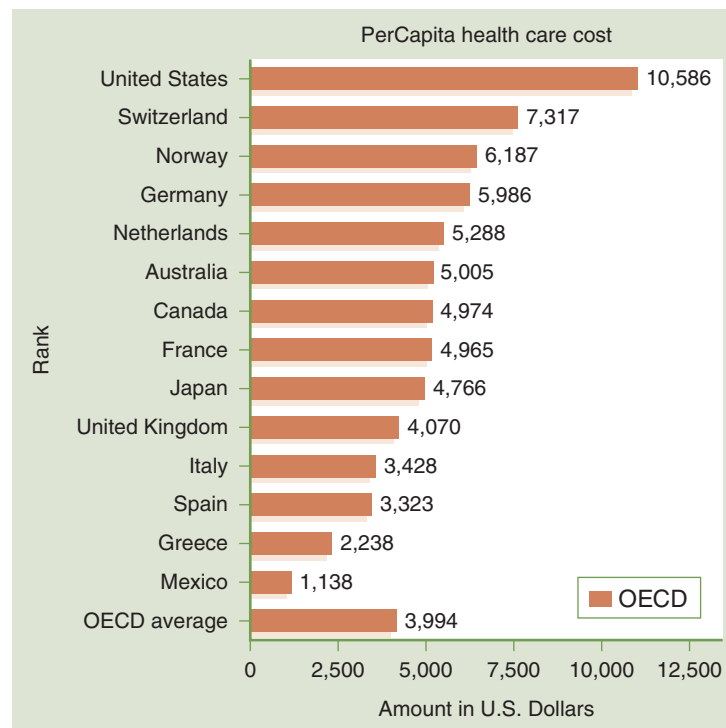


Figure 1.5 Healthcare Cost Comparison Among High Income Countries.

Data from OECD (2019), *Health at a Glance 2019: OECD Indicators*, OECD Publishing, Paris, <https://doi.org/10.1787/4dd50c09-en>

OECD is the Organisation for Economic Co-operation and Development, [oecd.org](https://www.oecd.org)

expenditures for medical care in United States far exceed those for individuals living in peer nations (**Figure 1.5**).

Some of the reasons healthcare costs are greater in the United States than in peer countries include the following:

- In most other high-income countries, there is little or no personal cost for medical care, including pharmaceuticals. In contrast, many Americans encounter financial barriers to accessing medical care because they lack health insurance or cannot afford co-pays and medicines with the insurance they do have.
- A 2019 study conducted by the Ways and Means Committee of the U.S. House of Representatives revealed that the average per-person cost of pharmaceuticals in the United States—about \$1,200 per year—is twice that of peer countries. Other than the United States, every high-income country negotiates prices with pharmaceutical manufacturers, thereby ensuring the lowest costs. In 2000, the U.S. Congress made negotiating drugs prices illegal, except for the Veterans Administration. Therefore, in the United States, drug companies can charge whatever they want for medicines—and do! (See **Table 1.3**.)

Table 1.3 Cost Comparison of Some Prescription Drugs

Drug	Cost (\$USD)			
	United States	Canada	India	United Kingdom, Australia, New Zealand
Celebrex (200 mg)	13.72	1.91	1.05	0
Paxil (20mg)	6.83	2.98	0.98	0
Nexium (40mg)	7.78	3.37	0.35	2.21
Viagra (100mg)	58.72	10.77	4.44	8.31
Nasonex (50mcg)	648.00	132.53	50.00	113.92

Data from U.S. Drug Prices vs. the World (2019). DrugWatch. <https://www.drugwatch.com/featured/us-drug-prices-higher-vs-world/>

Table 1.4 Effects of Income Inequality on Health Measures of U.S. Adults (2018) in Percentages

Health Measure	Income Level*		
	Low	Medium	High
Insufficient exercise	53.5	43.2	32.0
Limitation from chronic diseases	24.3	12.4	7.1
Self-rated <i>poor</i> health status	22.9	11.2	5.0
Current cigarette smoker	22.3	14.0	7.1
No health insurance	20.2	11.5	4.2
Nervous or distressed	18.8	9.2	1.6
Sad, hopeless, worthless (depressed)	15.8	7.4	2.3
Emphysema or bronchitis	8.0	4.8	2.8

*Low income = <\$35,000/yr.; medium income = \$50,000–\$75,000/yr.; high income = >\$100,000/yr. Data from U.S. Centers for Disease Control and Prevention, National Health Interview Survey, Summary Health Statistics Tables P-1a, P-11a, A-7a, A-8aA-11a, A-12a, A-14a, 2018. <https://www.cdc.gov/nchs/nhis/SHS/tables.htm>

- Many Americans have unhealthy living habits, consuming low-quality foods, which predisposes them to being overweight or obese; abusing alcohol and other drugs; being less likely to use seat belts; being involved in traffic accidents that involve alcohol; and using firearms in acts of interpersonal violence and suicide (Mokdad et al., 2018).
- Although Americans' average income is higher than those in peer countries, the United States also has higher levels of poverty (especially child poverty), income inequality, lower rates of social mobility, and lower levels of educational attainment. These economic and social disparities create **health disparities**—that is, differences in health status based on race, income, educational attainment, and access to healthy food, healthy environments, and quality medical care (Table 1.4).
- U.S. communities and the built environment are more likely than those in peer countries to be designed around automobiles, which discourages physical activity and increases exposure to air pollution from auto emissions.

Healthy People 2030

Each decade, the U.S. government issues a set of health objectives for the nation to be accomplished in the ensuing 10 years. The current set



How Much Money Is a Life Worth?

When U.S. federal agencies consider adopting new regulations intended to promote health or prevent injury or death, they try to figure out if the new regulations will be cost-effective and whether the gain in health is worth the cost to attain it.

For example, let's assume that of the several thousand water systems in the United States, 2,000 would have to spend a combined total of \$3 billion to modernize so that arsenic levels could be reduced to required (safe) levels. Let's also assume that spending this \$3 billion would save the lives of 60 people per year who would otherwise die of arsenic toxicity. If the costs of modernizing the water systems were spread over 20 years, then the \$3 billion would save $20 \times 60 = 1,200$ lives. That works out to \$2.5 million per life saved.

Is the new regulation worth the cost? Most definitely, according to *value of a statistical life* (VSL) calculations used by most federal agencies. Although each agency has its own specific VSL, the values for early and middle-aged adults tend to be between \$6 million and \$9 million per life; the VSL for someone age 65 or older is about half that for someone in middle age. The VSL represents how much a person or employer is willing to pay to greatly reduce or eliminate a fatal risk. It is not based on earning power, an estimate of one's contribution to society, or how much someone is loved by family and friends.

It's been pointed out that \$6 million to \$9 million per life seems reasonable until you're talking about yourself or someone you care about. Then, the dollar value of a life is close to infinite.

of health objectives is called *Healthy People 2030* (Healthypeople.gov). The main goals of *Healthy People 2030* are to:

- promote, strengthen, and evaluate the nation's efforts to improve the health and well-being of all people;
- eliminate health disparities, achieve health equity, and attain health literacy to improve the health and well-being of all;
- provide data that can drive targeted actions to address regions and populations with poor health or at high risk for poor health in the future; and
- distribute across national, state, tribal, and community levels and public, private, and not-for-profit sectors responsibility for promoting and achieving health and well-being and to develop and make available financially affordable means of health promotion, disease prevention, and treatment.

To attain its main goals, *Healthy People 2030* identifies hundreds of specific health objectives. Examples of *Healthy People 2030* objectives include the following:

- Reduce consumption of calories from added sugars in the population aged 2 years and older.
- Reduce the proportion of persons who are unable to obtain or delay in obtaining necessary medical care.
- Reduce firearm-related deaths.
- Increase the proportion of retail food store delis where foods displayed or stored hot are held at the proper temperature.

Healthy People 2030 recognizes that families, schools, worksites, communities, states, and national organizations must help individuals behave healthfully. This means not only that individuals are asked to make healthy lifestyle choices based on sound health knowledge but also that communities and organizations strive to provide quality education, housing, and transportation; health-promoting social and physical environments; and access to quality medical care. For example, informing people that it is healthy to consume five servings of fresh fruits and vegetables each day is insufficient if their community does not have stores or other sources of healthy food. Also, advising people to walk more is insufficient if their communities are not safe or lack parks or sidewalks.

Health Issues of North American College Students

About 23 million people attend North American colleges and universities. Two-thirds of those students are under 25 years of age. Among the most common health issues reported by North American college students are insufficient exercise, less-than-recommended consumption of fruits and vegetables, stress, and haphazard contraceptive use (**Table 1.5**).

Some typical health issues facing college students include the following:

Mental health. Students are exposed to a variety of stressors and pressures that can impair their mental health. Academic overload, tests, and competition can create feelings of insecurity, anxiety, inferiority, and depression. Traditional students may be lonely and have difficulty adjusting to early adulthood. Nontraditional students may feel isolated and without social support. Stress can impair sleep and lead to depression.

Food and weight. Time pressures and the easy availability of junk food induce many students to consume lots of sugar (candy, sodas)

Table 1.5 Common Health-Related Issues Reported by American College Students (Percentage)

Health-Related Issue	Male	Female
Not meeting movement activity guidelines	25	31
Daily consumption >1 sugar-sweetened beverage	65	67
Daily consumption <3 servings fruits or vegetables	52	51
Tanning >1 time in previous 12 months	41	63
Not having dental exam in previous 12 months	25	25
Contraceptive use in previous vaginal intercourse	88	89
Sexual abuse or assault in prior year	6	19
Intimate partner abuse, violence in prior year	17	19
Allergies (pollen, grass, pets)	37	49
Overweight (BMI >25)	37	34
Human papilloma vaccination	49	62
Cold or flu	41	58
Urinary tract infection	1	15
4+ sexual partners in previous year	16	14
Psychological distress	38	43
Loneliness	48	51
Challenges with procrastination	72	73
Challenges with academics	44	47

American College Health Association, 2020.

and saturated fat (fast food) and insufficient amounts of fruits and vegetables. Students may use food to cope with stress and uncomfortable emotions. Many students are overly concerned about their body size and shape to meet social expectations of attractiveness, causing some to develop eating disorders. Many college students are among the two-thirds of North American adults who are overweight. Thus, weight control is an issue for many students.

Health care. A large proportion of U.S. college students has limited access to health care because their colleges do not have

comprehensive services and they are without health insurance.

Substance use and abuse. Many students use tobacco, vaping, alcohol, and other drugs to cope with stress and unpleasant feelings or to fit in socially. Alcohol abuse is related to sexual assault and date rape, unintended pregnancies (from not using contraceptives properly or at all) and acquiring a sexually transmitted disease (STD) from not practicing safer sex.

Sexual and relationship health. Sexually active students of any age are at risk for acquiring an STD, becoming unintentionally pregnant, or becoming involved in sexual assault, especially acquaintance or date rape. Sexual activity to relieve academic stress, increase self-esteem, gain peer acceptance, or relieve loneliness can be mentally and spiritually damaging. Married students may find that the time and energy demands of college work create stress in their marital relationships.

Accidents and injuries. Many students commute to school, often rushing to and from work and home, and hence are at risk for automobile accidents. Alcohol-using students are at risk for auto and other kinds of accidents. Athletically active students are at risk for sports injuries.

Health issues, particularly stress and anxiety, are common impediments to academic performance (Table 1.6). Academic overload, tests, competition, career issues, relationship and family problems, and inadequate finances can create feelings of insecurity, anxiety, inferiority, and depression. Students can be lonely and have difficulty adjusting to campus life. Stress can impair sleep and also increase the risk for substance abuse.

How to Be Healthy

Considerable research has identified personal behaviors that contribute to health and longevity. These include the following:

- 1. Not smoking cigarettes. If you now smoke, quit. If you do not smoke, *never* start.
- 2. Quiet your mind (“destress”) with meditation, prayer, exercise, yoga, dance, or a creative endeavor.
- 3. Engage in regular physical activity (20 minutes per day; 3–4 days a week).

Table 1.6 Health Impediments to College Student Academic Performance	
Health Issue	Percentage Reporting
Stress	42
Sleep difficulties	25
Anxiety	31
Cold, flu, sore throat	24
Depression	25
Upper respiratory infection	11
Alcohol use	4
Poor health or death of someone close	14
Finances	14
Procrastination	47
Intimate Relationship	12

Data from Undergraduate Student Reference Group, Data Report, Spring 2020. American College Health Association Association, 2020. https://www.acha.org/documents/ncha/NCHA-III_SPRING-2020_UNDERGRADUATE_REFERENCE_GROUP_DATA_REPORT_updated.pdf

- 4. Interact regularly with people whose welfare you care about and who care about yours.
- 5. Get sufficient sleep (for most adults about 7–8 hours per night).
- 6. Eat a complete or near-vegetarian diet (e.g., Mediterranean Diet).
- 7. Consume no more than 10% of daily calories from saturated fat.
- 8. Limit snacking on junk foods that contain saturated fat, sugar, and salt.
- 9. Drink no more than one (women) or two (men) alcoholic drinks per day
- 10. Maintain a healthy body weight.

Surely, almost everyone wants to be healthy and well. Yet many people develop habits of thought and behavior that make them less well rather than more. Perhaps they are unaware of the ways in which some of their current life habits contribute to poor health. Or perhaps they know that changing certain health habits would be beneficial but they do not know how to make those changes.

It is said that knowledge is power, but with regard to living healthfully, that isn't always the case. Almost everyone knows that smoking cigarettes, driving after drinking alcohol, and eating junk food are unhealthy, but many people do those things anyway. Simply knowing what to do is no guarantee that a person will do it.

If you find yourself in a hole, stop digging.

—**Will Rogers**, American comedian, actor, and writer

One must act. Living healthfully requires action based on accurate knowledge. Action has the components of setting goals, developing strategies for attaining goals including managing obstacles and expectations of whether you will be successful (called *outcome expectancies*).

Goals

A goal can be something you want or something you want to prevent or avoid. There are short-term goals (“I want to get a good night’s sleep”) and long-term goals (“I want to get my degree”). Goals can be clearly defined (“I’m going to study this Friday night instead of partying”) or fuzzy (“I want to do better at school”).

Goals reflect a person’s or a culture’s values, which are beliefs about what is important. Two values that affect health are valuing oneself (**self-esteem**) and valuing the physical and social environments in which one lives. When you value yourself, you are more likely to engage in healthful behaviors and have a high degree of psychological well-being. When you value your physical and social environments, you are more likely to contribute to making them clean, healthy, and supportive in helping others to attain their goals.

Strategies for Action

Strategies involve generating a variety of possible paths (brainstorming) and evaluating the ones with the greatest likelihood for success. Knowledge sought from others should be evaluated critically to be sure it is authoritative and authentic and not solely for the other’s financial gain. Besides planning, people assess whether they have the resources and ability to carry out the actions to accomplish their goals.

Expectations for Success

People pursue goals with expectations about the outcomes of their efforts. **Optimism**—imagining a high probability of attaining a goal—motivates, whereas **pessimism**—imagining a low probability of attaining a goal—stifles. Optimism is associated with perceiving negative events as specific, temporary obstacles to be overcome, whereas pessimism is associated with explaining negative events as self-caused (it’s my fault), stable (it will last forever), and global (it’s going to ruin everything).

Optimism also is associated with the tendency to perceive oneself as being able to move toward a desired goal or away from an undesirable goal. Optimism is associated with inner self-talk that is encouraging and hopeful (“I’ll find a way to solve this problem”). On the other hand, the self-talk associated with pessimism is anxious (“I’m not sure what to do”; “I’m not sure it will work out”) and self-critical (“I’m inept”).

One reason people resist making healthy lifestyle changes is that an unhealthy attitude or behavior is rewarding in some way, even if it is harmful in some other way (e.g., smoking cigarettes to relieve stress). To change a health behavior, a person must believe that the benefits of change outweigh the costs and that she or he is capable of making the desired change. Rituals such as New Year’s resolutions and slogans such as “Just Do It” offer unrealistic models of how habits are changed. Desire and willpower alone are insufficient; research, planning, patience, taking a step at a time, and enlisting social support are required as well. Following are three models that describe the process of health behavior change.

The Health Belief Model

The **Health Belief Model** has the following key aspects:

- **Perceived susceptibility.** Individuals vary widely in their perception of susceptibility to a disease or adverse health condition. Some deny the possibility of contracting an adverse condition. Others admit to a statistical possibility of disease susceptibility. And still others believe there is real danger that they will experience an adverse condition or contract a given disease.
- **Perceived seriousness.** This refers to the beliefs a person holds about the effects of a given disease or condition on his or her life—for instance, pain and discomfort, loss of work time, financial burdens, difficulties with family, problems with relationships, and susceptibility to future conditions. It is important to include these emotional and financial burdens when considering the seriousness of a disease or condition.
- **Perceived benefits of taking action.** The action a person chooses will be influenced by his or her beliefs regarding the benefits of the action, particularly if the benefits outweigh the perceived costs.
- **Barriers to taking action.** Barriers such as inconvenience, cost, unpleasantness, pain, or upset may lead a person away from taking the desired action.

- **Cues to action.** Evaluation of benefits minus barriers provides the path of action. However, “cues to action”—either internal or external—may be required for the desired behavior to occur. An internal cue can be a sign, symptom, or feeling interpreted by someone as a health issue that needs attention. An external cue is a suggestion from someone that it’s a good idea to participate in some health-related activity.

The Transtheoretical Model

The **Transtheoretical Model** proposes that a health behavior change occurs through the following stages:

- **Precontemplation.** The person is not considering changing a particular behavior in the foreseeable future. Many individuals in this stage are unaware or barely aware of their vulnerability. Information is important during this stage.
- **Contemplation.** The person becomes aware that change is desirable but has not committed to act. The person often focuses on why it would be difficult to change. Information on options on how to change the behavior can be helpful during this stage.
- **Preparation.** The person desires change and commits to making that change in the near future, usually within the next 30 days. Instead of thinking why he or she can’t take action, the focus is on what can be done to begin. The person creates a realistic plan for making a change, including overcoming obstacles. This stage may include announcing the change to friends and family, researching how to make the change, making a calendar, or setting up a diary or journal to record progress and obstacles to progress.
- **Action.** The person implements the plan. The old behavior and the environmental situations that reinforced it are stopped and new behaviors and environmental supports are adopted. Obstacles are expected and noted, and strategies for overcoming them are implemented. Progress through this stage may take 6 months or more.
- **Maintenance.** The person strengthens the change, recognizing that lapses and even temptations to give up will occur. “Ebb and flow” is to be expected and should not be seen as failure. The person can remind himself or herself of the many benefits of and gains from the behavior change to help combat relapse.
- **Termination.** The person is not tempted to return to the previous behavior.

The Theory of Reasoned Action/Theory of Planned Behavior

The **Theory of Reasoned Action** or **Theory of Planned Behavior** proposes that changing a health behavior begins with an intention to adopt a new behavior (e.g., stop smoking). The intention is a combination of a positive attitude about performing the behavior (e.g., “Not smoking is good”) and the person’s thoughts about how others will respond to the new behavior (e.g., “My girlfriend will be happy if I stop”). Furthermore, change is affected by the person’s perceptions of how much control he or she has over bringing about the desired change (e.g., “I can do this if I get some support”).

Health Starts with Each of Us

It is clear from many kinds of health research that each one of us needs to do more to maintain and improve our health. When one is young, thinking about health is the last thing one is interested in doing. We (the authors) certainly did not worry about our health when we were teenagers or even in college. Moreover, 50 years ago, eating as much meat as you could afford, smoking cigarettes, and getting drunk were generally accepted behaviors. When you are 20 years old, thinking about living to 60 or 70 years of age is unimaginable. Unlike 50 years ago, we now know that protecting health is something that has to begin while you are young. Making lifestyle changes when you already are old (and presumably wiser) is mostly too late.

Health is similar to retirement: It is something you have to plan for and pay attention to while you are young. For example, putting away just a few dollars every month adds up to an enormous sum in 50 years, but most of us never think about doing it. The same holds true for health. Making small, positive changes in your health and lifestyle now will pay enormous dividends in the future.

After a resounding victory over the British Navy in the Battle of Lake Erie in the War of 1812, U.S. Naval Commander Oliver Hazzard Perry proclaimed, “We have met the enemy and they are ours.” To commemorate Earth Day 1971, American cartoonist Walt Kelly enlisted his creation, “Pogo the Opossum,” to proclaim, “We have met the enemy and he is us!”

Since the latter part of the 20th century, Earth’s 7.6 billion human inhabitants have



Figure 1.6 Pogo the Opossum.

Reproduced from Print 1980. The Walt Kelly Estate. Published by Swamp Yankee Studio. Box 2311, Bridgeport, CT 06608.

increasingly become challenged by a set of threats to their health and well-being. The gravest is global climate change resulting from a rapid increase of carbon dioxide in Earth's atmosphere from the burning of fossil fuels for energy. Today, no one could blame Pogo (see **Figure 1.6**) were he to reissue his 1971 proclamation with regard to climate change, as well as several global viral pandemics such as the recent SARS-CoV-2 (COVID-19), epidemics of heart disease, type 2 diabetes, sexually transmitted infections, depression, and anxiety, and the ever-present threat of nuclear conflict.

As Pogo might say, "Everyone's health is up to us!" Each of us is responsible for our overall health and well-being. We determine the ways our thoughts, feelings, and behaviors contribute to or lessen our health; whether our dietary habits are healthy; how much we care for rather than harm ourselves; and contributing to developing and maintaining health-promoting economic, social, and physical environments.

Critical Thinking About Health

1. As pointed out in this chapter, the major health issues of college students are sexual health, mental health, substance abuse, weight, accidents and injuries, and health care. Discuss which of these issues is of most concern to you personally. Explain your

reasons and worries. How can you deal with your concerns in a way that will improve your health?

2. Describe one lifestyle behavior you routinely engage in that you regard as harmful to your health (not exercising regularly, for example). Discuss your reasons for continuing to engage in this unhealthy behavior. Consider what you might do to change this behavior and list the steps you would take to accomplish the healthy change. Do you believe that you can make the healthy change?
3. Imagine that you are the surgeon general of the United States, who formulates national health policy. (One former surgeon general, the late C. Everett Koop, formulated the crusade against tobacco smoking a generation ago.) Describe what you believe is the primary health problem in the United States today. Justify your choice with as many facts as you can. Describe the steps you believe should be taken by government, private companies, organizations, and individuals to eradicate this health problem.

Chapter Summary and Highlights

Chapter Summary

The word *health* can have many meanings. For some, being healthy simply means not being sick. For others, physical health and strength matter most, and emotional and mental health are of lesser concern. For others, emotional and spiritual well-being are paramount. If you are concerned with *all* aspects of your health, then you think of health holistically. A holistic approach to health means that you strive for physical, mental, emotional, and spiritual well-being. You also try to live in harmony with your environment and with friends, family, and society.

Many people born since 2000 will live to 100 years of age or more. Adopting healthy lifestyles while young will help ensure a healthy old age. Most people are born healthy but become unwell because of unhealthy lifestyles. Chronic diseases such as heart disease, cancer, diabetes, and others are primarily the result of unhealthy lifestyle choices such as smoking tobacco, drinking alcohol to excess, consuming low-quality foods, and a lack of regular physical exercise. Maintaining a healthy body and mind will help you recover from occasional sickness and injuries that are inevitable parts of life.

The path to physical, mental, emotional, and spiritual health is to set health goals for yourself beginning

now. Adopt healthy habits that feel right for you. Perhaps the most important word to remember in striving for a healthy lifestyle is *moderation*. Eat when hungry and do not eat more once you are full. Refrain from mindless snacking when bored or while engaged in sedentary recreational activities (watching TV, playing video games, using social media). Make movement a part of your daily life. Walk more, use stairs instead of elevators, ride a bike, dance, or do yoga. And be sure to take time to quiet your mind, especially when you are angry, stressed, or upset.

Health does not come from outside ourselves. The key to a healthy life has always been self-responsibility. Doctors, hospitals, drugs, and government rules cannot make you healthy. They can help prevent illness and injuries and often restore body and brain to a semblance of normal functioning. But you are always the one responsible for your moment-to-moment, day-to-day health.

Highlights

- Health is not only the absence of disease but also living in harmony with oneself, friends and relatives, and social and physical environments.
- The World Health Organization defines health as “a state of complete physical, mental, and social well-being and not merely the absence of disease and infirmity.”
- Health means being responsible for preventing personal illness and injuries as well as knowing when to seek medical help.
- The dimensions of wellness are emotional, intellectual, spiritual, occupational, social, and physical.
- Determinants of health and wellness consist of personal biology, economic and social circumstances, environmental, and individual factors that affect individuals and communities.
- Many illnesses (e.g., diabetes, heart disease, cancer) are *lifestyle diseases*—that is, primarily attributable to unhealthy living habits. Taking responsibility for your health while you are young is the best way to reduce the risk of chronic disease later in life.
- Unhealthy lifestyles and behaviors are responsible for half of all deaths in the United States each year.
- The health status of Americans is lower than nearly all of its peer-income countries, principally because of high costs and the absence of rules regarding access to medical and health care.
- *Healthy People 2030* is a set of national health objectives characterized by enhancing the quality of life, reducing the incidence of preventable diseases and premature deaths, and reducing disparity in health status among different demographic groups.
- Health issues facing North American college students include stress, anxiety, depression, overweight, lack of health care, substance abuse, and sexual and relationship health.
- Changing health behaviors requires knowledge, planning, and social support.

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Key Terms

well-being: qualities of life that include positive emotions (e.g., happiness, contentment) and life satisfaction

medical model: interprets health in terms of the absence of disease and disability

chi: universal energy that must be distributed harmoniously throughout the mind–body to attain and maintain health; also known as *qi*

wellness model: encompasses the physiological, mental, emotional, social, spiritual, and environmental aspects of health

physical wellness: maintaining a healthy body by eating right, exercising regularly, avoiding harmful habits, and making informed, responsible decisions about your health

emotional wellness: understanding emotions and knowing how to cope with problems that arise in everyday life and how to manage stress

intellectual wellness: having a mind open to new ideas and concepts

social wellness: ability to perform social roles effectively, comfortably, and without harming others

spiritual wellness: state of balance and harmony with yourself and others

occupational wellness: enjoyment of what you are doing to earn a living and contribute to society

environmental wellness: living in an environment characterized by clean air, water, and land that also supports basic human needs and is free of interpersonal violence and the threat of climate change

financial wellness: attaining and maintaining resources to meet physical, psychological, and social needs by planning for the future, preparing for unforeseen financial difficulties, and being aware of others' financial values, needs and circumstances

determinants of health and wellness: consist of personal, social, economic, and environmental factors that affect individual, community, and world health

lifestyle diseases: negative health conditions from personal behaviors such as cigarette smoking, poor diet, and a sedentary lifestyle

chronic disease: a disease that persists for years or even a lifetime

type 1 (insulin-dependent) diabetes: when the pancreas is diseased and unable to manufacture the hormone insulin to regulate the level of sugar in the blood

type 2 (non-insulin-dependent) diabetes: caused by too much fat in the blood (generally from being overweight), resulting in the body becoming resistant to the actions of insulin

health status: an individual's state of health and wellness, accounting for the presence of disease, disability, and the individual's self-rated assessments of overall physical, mental, and social health

incidence: the number of new cases of a particular disease

prevalence: the number of people within a population with a particular disease

health disparities: differences in health status based on race, income, educational attainment, and access to healthy food, healthy environments, and quality medical care

self-esteem: the judgment one places on one's self-worth

optimism: the thought process of imagining a high probability of attaining a goal

pessimism: the thought process of imagining a low probability of attaining a goal

Health Belief Model: health behavior change is a function of a person's perceived risks for behaving as usual and benefits from change

Transtheoretical Model: health behavior change starts with considering making a change followed by planning, implementing the plan, and overcoming obstacles theory of reasoned action: change begins with an intention to adopt a new behavior and doing so is beneficial

Theory of Reasoned Action or **Theory of Planned Behavior:** proposal that changing a health behavior begins with an intention to adopt a new behavior